

The death of Dr. A. A. Henderson, U. S. N., of Dr. D. R. Bannan, U. S. N., members, and John Edward Gray, correspondent, was announced.

April 13.

The President, Dr. RUSCHENBERGER, in the chair.

Ten members present.

The following paper was presented for publication: "Synopsis of the Geomyidæ." By Dr. Elliott Coues, U. S. A.

April 20.

The President, Dr. RUSCHENBERGER, in the chair.

Twenty-four members present.

The following paper was presented for publication: "Descriptions of a new Fossil Ostrea from the Amazon." By T. A. Conrad.

On a Curious Rhizopod.—Prof. LEIDY remarked that in some water with aquatic plants, from Absecom Pond, N. J., preserved in an aquarium during the winter, he had detected a remarkable rhizopod, which he thought might best be compared to the reticular pseudopods of a Gromia separated from the body. The creature moved actively and assumed the most varied forms. At one time it appears as a cylinder or a ball of jelly which may spread itself into a disk of extreme thinness, from the edge of which emanate a multitude of delicate pseudopods minutely ramifying, and with the contiguous branches anastomosing, as in the extension of the net of a Gromia. At other times the creature divides up into branches from a trunk in the manner of a tree, but with the contiguous branches anastomosing. At times also the animal assumes the form of a cord, and the jelly accumulating along some portion of it will then move along the apparent cord like a drop of water running down a piece of twine. The branching pseudopods extending into a net, the large angular meshes gradually contract by the widening of the cords, so that the meshes become perfectly circular and appear like vacuoles imbedded in the jelly. A circulation of jelly with granules is observed along all the pseudopodal filaments exactly as in Gromia. No trace of a nucleus or investing membrane in any position could be detected, but the protoplasmic structure contained a multitude of minute vacuoles. Most of the specimens contained no food, and only one of the largest was observed to contain numerous minute Closteria.

The largest specimen, consisting of a net emanating from three divisions, occupied a semicircular space of $\frac{3}{5}$ of a mm. by $\frac{2}{5}$ mm. Another specimen with a central disk $\frac{1}{5}$ mm. by $\frac{1}{8}$ mm. with its net, occupied a circular space $\frac{2}{5}$ mm. in diameter. A small cord-like specimen was $\frac{1}{5}$ mm. long with an expanded end $\frac{1}{6\frac{1}{2}}$ mm. wide; and another irregular cord-like specimen was $\frac{2}{5}$ of a mm. long with the widest portion $\frac{1}{50}$ mm.

Amœba porrecta, of Schultze, from the Adriatic Sea, most resembles the creature described. While it is nearly related with *Gromia*, *Lieberkuehnia*, *Vampyrella*, *Nuclearia*, etc., it appears sufficiently distinct in its characters to represent another genus, and with the species may be appropriately named *BIOMYXA VAGANS*.

On Psorosperms in a Mallard Duck.—Prof. LEIDY remarked that Dr. Elliott Coues had recently submitted to his examination some portions of the flesh of a mallard duck preserved in glycerine. The interstices of the muscles of the duck were stated, in the letter which accompanied the specimens, to be everywhere occupied by abundance of parasites. Specimens of these, in the portions of flesh examined, proved to be oval white bodies from one to two lines long, and about one-third of a line thick. Beneath the microscope they were found to contain myriads of fusiform corpuscles, resembling minute naviculæ, and measuring about the $\frac{1}{1500}$ th of an inch in length. Similar bodies were first discovered in many fishes by the late Prof. J. Müller, and described by him as parasites under the name of *Psorosperms*. They have been repeatedly observed since by Retzius, Robin, and others, in the muscles and other parts of fishes, and they are usually regarded as vegetable parasites. I have not previously heard of similar organisms having been detected in birds. Though the mallard is not a fish eater, the bird may have become infected by having swallowed an infected fish.

On a Mouthless Fish.—Dr. GEORGE W. LAWRENCE, of Hot Springs, Arkansas, in the course of correspondence, had mentioned to Prof. LEIDY the occurrence of a mouthless fish in the Onachita River. At his request Dr. Lawrence had sent him a specimen, which he now exhibited to the members. The fish is the Buffalo sucker, *Catostomus bubalus*, Kirtland, living in the Mississippi and its tributaries. The specimen is fifteen inches long, and appears to be in good condition. The maxillaries, premaxillaries, and the mandible are absent, and the integument is tightly extended between the end of the snout, the suborbitals, and the articular ends of the quadrates. In the centre of this expansion of the skin there is a small oval aperture one-fourth of an inch fore and aft, and one-eighth of an inch in transverse diameter. The hole is sufficient to admit a current of water for the purposes

of respiration; but it is difficult to understand how the fish had procured its food. The cyprinoids, generally, are remarkable for their small toothless mouth, but it is, nevertheless, important in its prehensile capacity. The condition of the specimen is, of course, a deformity, but appears to be the result of a want of development of the jaws, and not of accidental violence. Dr. Lawrence observes that a few of such fishes are caught every year in the Ouachita, sometimes with the oral orifice so small as barely to admit a crow-quill, and occasionally without even the vestige of an orifice. If the last condition really occurs, the fish can only supply itself with food and with water for respiration through the branchial fissures, by the alternating outward and inward movements of the opercula.

On Ouramœba.—Prof. LEIDY remarked that his description of the curious rhizopod, he had named *Ouramœba*, in the Proceedings of May 12, 1874, having been noticed by Mr. Archer, of Dublin, this gentleman had directed his attention to notices of the same animal described in the Proceedings of the Dublin Microscopical Club for Feb. 1866 and Oct. 1873. In these notices Mr. Archer regards the animal only as an *Amœba villosa* in another condition from that ordinarily observed. Mr. Archer's description clearly refers to the same animal as that named *Ouramœba*, in which he aptly compares the bunch of tail-like appendages to "a bundle of dipt-candles," and it is of some interest to know that the singular creature, like so many other rhizopods, is common to Europe and America.

While Mr. Archer regards the "Amœba with remarkable posterior linear processes" (Proc. Dublin Micr. Club, Oct. 1873, 314) as exhibiting another condition of existence of an *Amœba* from the one usually observed in the genus, he gives no evidence that such is the fact. Until this is proved to be the case the peculiar character of the animal justifies its separation as representing a distinct genus with the name of *Ouramœba*.

Since the latter was first noticed, many additional specimens have been observed, and though, as in the case of rhizopods generally, they exhibit considerable variation, it appears that several species may be distinguished.

The genus may be thus characterized:—

OURAMŒBA.—Body, as in *Amœba*, consisting of an everchanging fluctuating mass of jelly, composed of a granular entosarc, including a contractile vesicle and a discoid nucleus, and defined by a clearer ectosarc. Pseudopods usually digitiform, projecting anywhere but usually in a direction differentiated as forward, and composed of extensions of the ectosarc closely accompanied by included extensions of the entosarc. Posterior part of the body furnished with one or more tufts of non-retractile, rigid, linear

appendages, branching radically from common points in the vicinity of the contractile vesicle.

OURAMEBA VORAX.—Fig. A. Body active, usually ramifying forward from a median stock extending from the posterior blunt extremity. Posterior appendages numerous, originating in several tufts up to five or six, from one-third to nearly the length of the body, linear, straight or curved, uniformly cylindrical, or here and there contracted, commencing in a pointed manner from a common root, and terminating obtusely. Length of body, from $\frac{1}{2}$ to $\frac{1}{3}$ of a mm.; length of appendages from one-third to nearly that of the body.



The creature consumes multitudes of diatoms, desmids, and filamentous algæ. Found in springs and ponds, near Darby Creek, Delaware County, Pennsylvania.

Further observations have induced me to believe that the animal named *O. lapsa* is the same as the preceding. A variety has been observed in several instances in which the animal had a single pair of appendages springing from a common root.

OURAMEBA BOTULICAUDA.—Fig. B. This species is predicated on the form alluded to in my previous communication as having a single tuft of three monilliform rays. I have seen it a number of times since, and its characters appear to be sufficiently constant to recognize it as a distinct species. It is much smaller than the preceding. The body measures about the $\frac{1}{16}$ of a millimetre. The appendages are usually in a tuft of three;

each appendage consisting of from one to three sausage-like joints. Found with the preceding.

The Occurrence of Celestine in Blair County, Pennsylvania.—Mr. CHAS. A. YOUNG stated that Dana gives, as the original locality of celestine, Frankstown, Huntington Co., Pa. The locality is at Bells' Mills, Blair County. The mineral is found at the foot of the western slope of Brush Mountain, on the west branch of the Little Juniata, one mile south of railroad station.

The celestine occurs in beds of irregular thickness, in a hard gray limestone slate. The beds of the mineral are sometimes almost an inch in thickness, thinning out in the space of a few feet to a thickness scarcely more than that of a piece of paper.

The beds of the mineral sometimes split, having for a parting a soft brown shale, which material also directly underlies and overlies the mineral to a depth of somewhat less than an inch.

The celestine is of the fibrous variety, the fibres being perpendicular to planes of bedding. It is rather pale, the greater part of it having a very faint blue tint.

April 27.

The President, Dr. RUSCHENBERGER, in the chair.

Twenty-four members present.

The By-Laws of the Academy were amended, as follows:—
Art. 2, Chap. 2, in place of "Minors shall not be eligible as members or correspondents," the following words are substituted:—
"Persons not under sixteen years of age may be elected members, provided their nominations be first approved by the Council. Members under the legal age of twenty-one are not entitled to vote at any meeting of the Academy, nor to serve on committees."

On the Structure of the York County Valley Limestone, and on Micro-photography of Minerals.—Prof. FRAZER asked the permission of the Academy to put on record two observations made since the last meeting. The first concerned the structure of the York County limestone valley. H. D. Rogers (whose work was so accurate and full of thought that corrections can only be hazarded after careful consideration), in his report of a section down the Susquehanna from Wrightsville to Havre de Grace, speaks of two folded anticlinals which separate the main synclinal basin of amoral limestone from the smaller one, which crosses the river from Lancaster County near Cabin Branch Run.

The dips as observed and recorded by my party last season fully justify this interpretation, and were it not for other facts not known at the time the above section was made, no one could hesitate to accept this explanation.

But on comparing seven sections made across the lower silurian measures from Littlestown to Wrightsville, it was found that in every case but the latter, there seemed to be abundant evidence of a vault along which the southeastern half of the valley had been torn away by an upthrow, and the remaining limestone abutted on the lower side of the older slates. It was found that the supposed double anticlinal wave structure depended on a single dip, which it only needs to suppose were local in character to bring this section into conformity with the rest. The symmetrical character of the valley also was based upon a single dip in this latter case, not at all inconsistent with a view which would harmonize all the sections.

The other point which Prof. Frazer desired to record was in